

## **Abstract 2 – August 21, 2017**

Cioffi I, Landino D, Donnarumma V, Castroflorio T, Lobbezoo F, Michelotti A. Frequency of daytime tooth clenching episodes in individuals affected by masticatory muscle pain and pain-free controls during standardized ability tasks. *Clin Oral Investig.* 2017 May;21(4):1139-1148.

### **OBJECTIVES:**

Tooth clenching has been suggested to be related to temporomandibular pain. However, the electromyographic characteristics of daytime clenching episodes have been minimally investigated. This study aimed to analyze the frequency, amplitude, and duration of daytime clenching episodes in patients with masticatory muscle pain and pain-free individuals.

### **METHODS:**

Fifteen women with masticatory muscles myalgia (MP group, mean  $\pm$  SD age = 26.4  $\pm$  7.6 years) matched for age to 18 pain-free women (CTR group, mean  $\pm$  SD age = 25.3  $\pm$  2.8 years) were submitted to three different ability tasks (filling out questionnaires for 40 min, reading for 20 min, and playing a videogame for 20 min). The electromyographic activity periods (AP) of the right masseter greater than 10 % (AP10), 20 % (AP20), and 30 % (AP30) of the maximum voluntary contraction were analyzed.

### **RESULTS:**

The mean frequencies of AP10, AP20, and AP30 were greater in MP than in CTR individuals (all  $p < 0.05$ ). The mean duration of AP10 was higher in MP group than CTR group only while filling out the questionnaires ( $p = 0.0033$ ). CTR group had an increased frequency and duration of AP10 while playing the videogame than while reading a magazine. The ability tasks did not affect the muscle activity in the MP group.

### **CONCLUSIONS:**

Individuals with masticatory muscle pain have an increased frequency of both high and low-intense daytime clenching episodes. The type of ability task affects the frequency and the duration of clenching episodes only in pain-free individuals.

### **CLINICAL RELEVANCE:**

Clinicians should recognize that the frequency and intensity of daytime clenching are noticeably increased in individuals with masticatory muscle pain in order to better tailor treatment.